## ABSTRACT OF THE DISCLOSURE

A gateway system for voice communication and its controlling method are provided in which a voice signal transmitted from terminals is compressed to be transmitted to the Internet and the compressed voice signal transmitted from the Internet is uncompressed to be transmitted to the terminals, thereby enabling voice communication between terminals. The gateway system is provided for voice communication of a communication system for performing communication among PSTN terminals connected to a PSTN, IP terminals connected to an Internet protocol-based local area network (LAN) and remote terminals of a different area connected to the Internet. The gateway system includes a PSTN gateway for rendering the PSTN terminals and the IP terminals to communicate with each other; and an inter-gateway for rendering the IP terminals and the PSTN terminals through the PSTN gateway to communicate with the remote terminals through the Internet.